

**Work Order ID 62346**

Monday, September 27, 2010 2:48:13 PM

Page 2

Item ID: D4132-042  
Revision ID:  
Item Name: Wearplate, RH Fwd

Accept

Setup Start

Stop

**Work Order ID 62346**

Monday, September 27, 2010 2:48:13 PM

Page 1

Item ID: D4132-042  
Revision ID:  
Item Name: Wearplate, RH Fwd

Accept

Setup Start

Stop

Start Date: 9/27/2010 Start Qty: 3.00  
Required Date: 9/29/2010 Req'd Qty: 3.00

Cust Item ID:  
Customer:

OK to D4132 Rev. A..

Reference:

Approvals: Process Plan: mk Date: 10-9-27 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

**PRELIMINARY ISSUE**

| Sequence ID/<br>Work Center ID | Operation<br>Description  | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|---|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| Draw Nbr                       | Revision Nbr  |                      |         |        |              |               |               |                  |                |
| D4132                          | pb1   |                      |         |        |              |               |               |                  |                |
| 100                            | FLOW WATER JET  | 0.00                 |         |        |              |               |               |                  |                |
| Waterjet                       | Memo  | 0.00                 |         |        |              |               |               |                  |                |
| FLOW CNC Waterjet              | 1-Cut D4132-1F as per Dwg D4132<br>Dwg Rev: <u>pb2</u><br>Prog Rev: <u>pb2</u><br>2-Deburr if necessary |                      |         |        |              |               |               |                  | (3)            |
| 110                            | QC2- Inspect parts off machine FAI/FAIB   | 0.00                 |         |        |              |               |               |                  |                |
| QC                             | Memo  | 0.00                 |         |        |              |               |               |                  |                |
| Quality Control                |   |                      |         |        |              |               |               |                  |                |
| 120                            | QC8- Inspect parts - second check   | 0.00                 |         |        |              |               |               |                  |                |
| QC                             | Memo  | 0.00                 |         |        |              |               |               |                  |                |
| Quality Control                |   |                      |         |        |              |               |               |                  |                |

10-9-27

10-9-27

10-09-27 (3)

Monday, September 27, 2010 2:48:13 PM

**Item ID:** D4132-042

**Accept**

**Setup Start**

Revision ID:

**Item Name:** Wearplate, RH Fwd

**Stop**

**Start Date:** 9/27/2010      **Start Qty:** 3.00

**Cust Item ID:**

**Required Date:** 9/29/2010      **Req'd Qty:** 3.00

**Customer:**

**Reference:**

Run Start

**Approvals:**

### Process Plan:

**Date:****Tooling:**

**Date:**

**Stop**

**QC:**

Date:

**SPC (Y/N):**

**Date:**

| Sequence ID/<br>Work Center ID | Operation<br>Description                                 | Set Up/<br>Run Hours | Tool ID               | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--|----------------------|-----------------------|--------|--------------|---------------|---------------|------------------|----------------|
| 160                            | QC10- Inspect visual per QSI004- ground welds            | 0.00                 | - inspector to PB2    |        |              |               |               |                  |                |
| QC<br>Quality Control          | Memo   | 0.00                 | Dy only<br>8/10/02/29 | (73)   |              |               |               |                  |                |
| 170                            | QC5- Inspect part completeness to step on W/O            | 0.00                 |                       |        |              |               |               |                  |                |
| QC<br>Quality Control          | Memo   | 0.00                 |                       |        |              |               |               |                  |                |
| 180                            | Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3                 | 0.00                 |                       |        |              |               |               |                  |                |
| Powdercoat<br>Powder Coating   | Memo<br>START TIME:<br>OVEN TEMPERATURE:<br>FINISH TIME: | 0.00                 |                       |        |              |               |               |                  |                |



**Work Order ID 62346**

Monday, September 27, 2010 2:48:13 PM

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Item ID: D4132-042      **Accept**      Setup Start  
Revision ID:      Stop  
Item Name: Wearplate, RH Fwd  
Start Date: 9/27/2010      Start Qty: 3.00      Cust Item ID:  
Required Date: 9/29/2010      Req'd Qty: 3.00      Customer:  
Reference:

Approvals:      Process Plan:      Date:      Tooling:      Date:      Run Start  
QC:      Date:      SPC (Y/N):      Date:      Stop

| Sequence ID/<br>Work Center ID | Operation<br>Description                                 | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 220                            | Identify as per dwg & Stock Location: _____<br>Packaging | 0.00                 |         |        |              |               |               |                  |                |
| Packaging                      | Memo   | 0.00                 |         |        |              |               |               |                  |                |
| Packaging                      |  |                      |         |        |              |               |               |                  |                |
| 230                            | QC21- Final Inspection - Work Order Release              | 0.00                 |         |        |              |               |               |                  |                |
| QC                             | Memo   | 0.00                 |         |        |              |               |               |                  |                |
| Quality Control                |  |                      |         |        |              |               |               |                  |                |

POSITIVE RECALL  
EFFECTIVE 10/09/29 AUTH LL  
RELEASED LL DATE 10/09/29

10/09/29

# Picklist Print

Monday, September 27, 2010 2:48:12 PM

Page 1

Work Order ID: 62346

Parent Item: D4132-042

Parent Item Name: Wearplate, RH Fwd

Start Date: 9/27/2010

Required Date: 9/29/2010

Start Qty: 3.00

Required Qty: 3.00

Comments: IPP Rev:A 10.06.24 new issue DD verf:EC

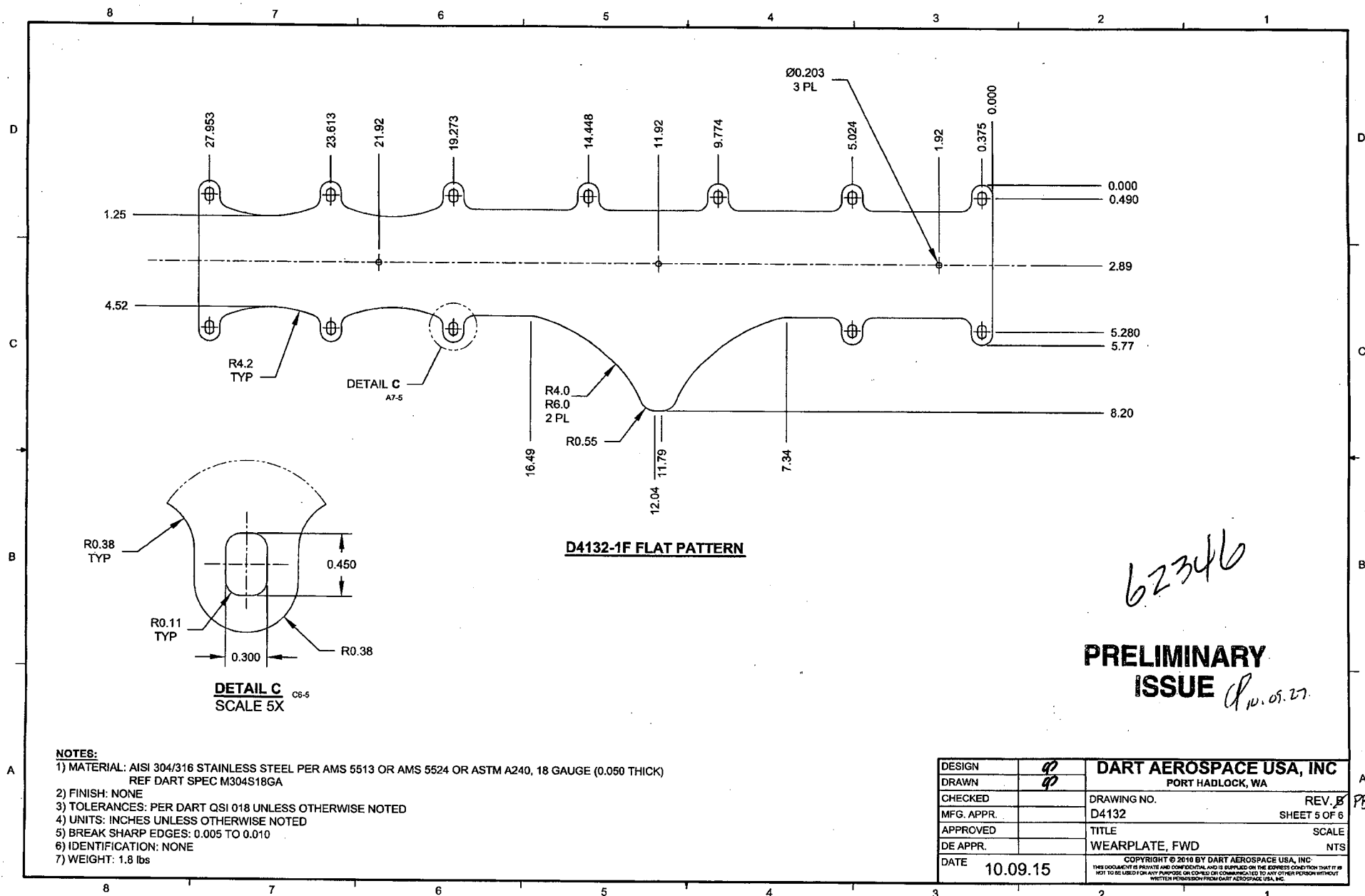
| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand  | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|-----------------|-------------|--------------|---------------|----------------|--------|
| D4132-3                         |                        | Manufactured  | No          |                     |                  | 200             | Each               | 1.0000          | 1           | 3            |               |                |        |
| Gasket                          |                        |               |             |                     |                  |                 |                    |                 |             |              |               |                |        |
|                                 |                        |               |             |                     | <u>Location</u>  | <u>Loc Qty</u>  |                    | <u>Loc Code</u> |             |              |               |                |        |
|                                 |                        |               |             |                     | GA 862161        | 1               |                    |                 |             |              |               |                |        |
|                                 |                        |               |             |                     | 60303            | 1               |                    |                 |             |              |               |                |        |
| M304S18GA                       |                        | Purchased     | No          |                     | 862317           | 100             | sf                 | 98.8879         | 1.555       | 4.910526     |               |                |        |
| 304/316 .050 Sheet              |                        |               |             |                     |                  |                 |                    |                 |             |              |               |                |        |
|                                 |                        |               |             |                     | <u>Location</u>  | <u>Loc Qty</u>  |                    | <u>Loc Code</u> |             |              |               |                |        |
|                                 |                        |               |             |                     | MAT20            | 98.8879         |                    |                 |             |              |               |                |        |
|                                 |                        |               |             |                     | 111743           | 6.55            |                    |                 |             |              |               |                |        |
|                                 |                        |               |             |                     | 112885           | 0.1679          |                    |                 |             |              |               |                |        |
|                                 |                        |               |             |                     | 113062           | 40.17           |                    |                 |             |              |               |                |        |
|                                 |                        |               |             |                     | 115389           | 52              |                    |                 |             |              |               |                |        |

Sp 12/29/29 (3)

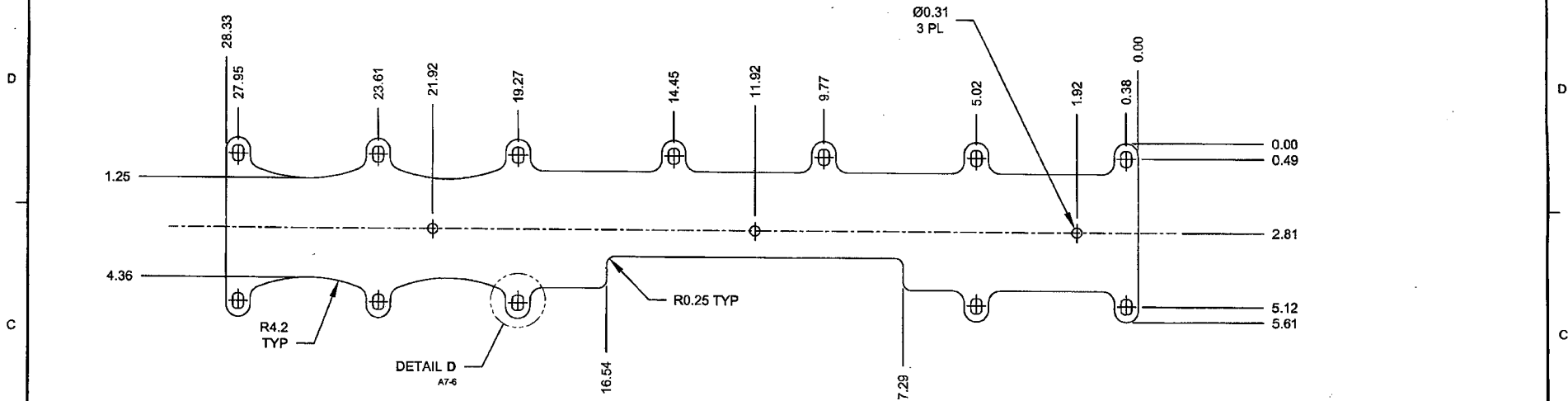
B10-9-07

(3)

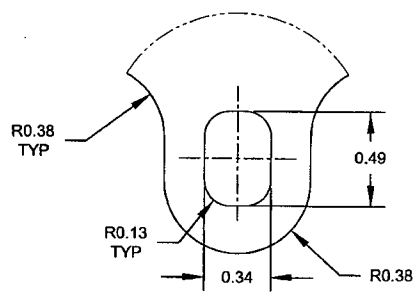
112885



8 7 6 5 4 3 2 1



**D4132-3 GASKET**



**DETAIL D**  
SCALE 5X

62346  
**PRELIMINARY  
ISSUE**  
10.09.15

**NOTES:**

- 1) MATERIAL: BLACK NEOPRENE SHEET, 0.063 THICK, 60 DUROMETER  
REF DART SPEC M-NEO60-S.063
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.36 lbs

|            |          |  |
|------------|----------|--|
| DESIGN     | 92       | <b>DART AEROSPACE USA, INC</b>   |
| DRAWN      | 92       | PORT HADLOCK, WA   |
| CHECKED    |          | DRAWING NO. REV. B   |
| MFG. APPR. |          | D4132 SHEET 6 OF 6   |
| APPROVED   |          | TITLE SCALE  |
| DE APPR.   |          | WEARPLATE, FWD NTS   |
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8 7 6 5 4 3 2 1

|                                  |  |                        |
|----------------------------------|--|------------------------|
| DART AEROSPACE LTD               |  | Work Order: 62346      |
| Description: WEAR PLATE          |  | Part Number: D4132-042 |
| Inspection Dwg: D4132-2 Rev: pb2 |  | Page 1 of 1            |

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

| Drawing Dimension | Tolerance     | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|-------------------|---------------|------------------|--------|--------|----------------------|----------|
| Ø .203            | +0.005 - .001 | .204             | ✓      |        | BU02                 |          |
| .450              | ±.010         | .456             | ✓      |        | V                    |          |
| .300              | ±.010         | .301             | ✓      |        | V                    |          |
| .490              | ±.010         | .487             | ✓      |        | V                    |          |
| 1.25              | ±.030         | 1.25             | ✓      |        | V                    |          |
| 2.89              | ±.030         | 2.886            | ✓      |        | V                    |          |
| 5.286             | ±.016         | 5.281            | ✓      |        | V                    |          |
| 5.77              | ±.030         | 5.769            | ✓      |        | V                    |          |
| 8.20              | ±.030         | 8.195            | ✓      |        | V                    |          |
| .375              | ±.010         | .375             | ✓      |        | V                    |          |
| 1.92              | ±.030         | 1.917            | ✓      |        | V                    |          |
| 5.024             | ±.010         | 5.025            | ✓      |        | V                    |          |
| 9.774             | ±.016         | 9.774            | ✓      |        | T BU01               |          |
| 11.92             | ±.030         | 11.92            | ✓      |        | T                    |          |
| 14.448            | ±.010         | 14.448           | ✓      |        | T                    |          |
| 19.278            | ±.010         | 19.278           | ✓      |        | T                    |          |
| 21.92             | ±.030         | 21.92            | ✓      |        | T                    |          |
| 23.613            | ±.010         | 23.613           | ✓      |        | T                    |          |
| 27.953            | ±.010         | 27.953           | ✓      |        | T                    |          |
| .050              | ±.010         | .056             | ✓      |        | V                    |          |
|                   |               |                  |        |        |                      |          |
|                   |               |                  |        |        |                      |          |
|                   |               |                  |        |        |                      |          |

|                        |             |                     |     |
|------------------------|-------------|---------------------|-----|
| Measured by: <u>BB</u> | Audited by: | Prototype Approval: | N/A |
| Date: <u>10-9-27</u>   | Date:       | Date:               | N/A |

| Rev | Date | Change    | Revised by | Approved |
|-----|------|-----------|------------|----------|
| A   |      | New Issue | KJ/JLM     |          |



| W/O: 62346 |      | WORK ORDER CHANGES                               |    |          |     |                                     |                          |
|------------|------|--|----|----------|-----|-------------------------------------|--------------------------|
| DATE       | STEP | PROCEDURE CHANGE                                 | By | Date     | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
| 10.09.29   | 100  | Acceptable to D4132 Rev A<br>REF ATTACHED EMAIL. | CP | 10.09.29 |     | CP<br>10.09.29<br>CSL 042           |                          |
|            |      |  |    |          |     |                                     |                          |

Part No: D4132-042 PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

## Chris Provencal

---

**From:** David Shepherd [dshepherd@dartaero.com]  
**Sent:** September 29, 2010 2:19 PM  
**To:** 'Chris Provencal'  
**Cc:** 'Marc Bellavance'; 'Mike Petsche'; 'Dan Stow'  
**Subject:** RE: Wearplate photos

No ... ship the wearplates.

David

---

**From:** Chris Provencal [mailto:cprovencal@dartaero.com]  
**Sent:** Wednesday, September 29, 2010 12:00 PM  
**To:** 'David Shepherd'  
**Cc:** 'Marc Bellavance'; 'Mike Petsche'; 'Dan Stow'  
**Subject:** RE: Wearplate photos

David,

I am signing off the wearplates based on Rev. A of the dwgs, with the deviation that the wearplates are 0.150 wider. Additionally, on the fwd wearplate, one tab is shifted 0.050" aft, and another tab is shifted .150" aft. This is a minor, non-structural, change to improve fit on the skidtube.

On that basis, do you have any objection to shipping the wearplates today?

-Chris

---

**From:** Dan Stow [mailto:dstow@dartaero.com]  
**Sent:** September 29, 2010 12:54 PM  
**To:** 'Mike Petsche'  
**Cc:** 'David Shepherd'; Chris Provencal; 'Marc Bellavance'  
**Subject:** FW: Wearplate photos  
**Importance:** High

Mike,

Can I tell the customer that we are shipping the wearplates today?

Dan

Hello Francesco,

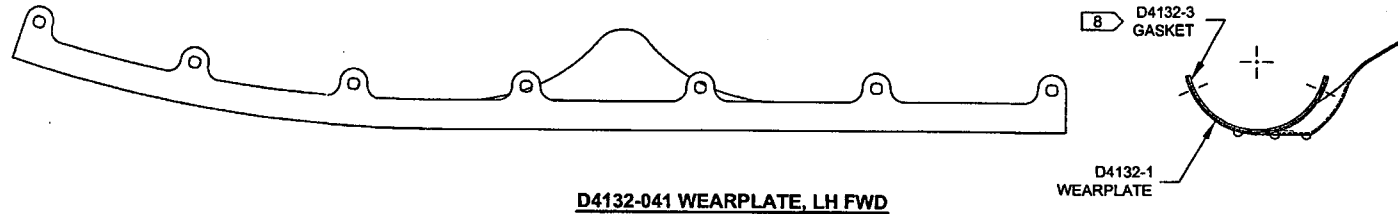
Please see the response from engineering below.

Regards,

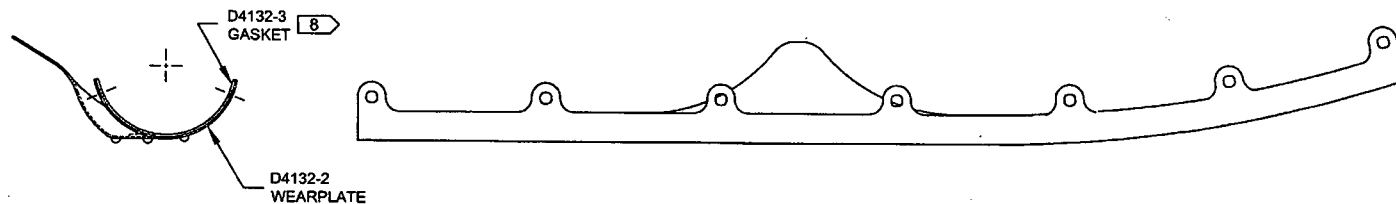
Dan Stow  
Technical Support  
Dart Aerospace Ltd.  
[dstow@dartaero.com](mailto:dstow@dartaero.com)

SHOP COPY  
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SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 62346

| QTY  | QTY  | PART NUMBER  | DESCRIPTION             |
|------|------|--------------|-------------------------|
| -041 | -042 |              |                         |
| X    | X    | D4132-041    | WEARPLATE, LH FWD       |
|      |      | D4132-042    | WEARPLATE, RH FWD       |
| 1    |      | D4132-1      | WEARPLATE               |
| 1    | 1    | D4132-2      | WEARPLATE               |
| 1    | 1    | D4132-3      | GASKET                  |
| A/R  | A/R  | 1300 / 1300L | 3M SCOTCH-GRIP ADHESIVE |



D4132-041 WEARPLATE, LH FWD



D4132-042 WEARPLATE, RH FWD

**RELEASED**  
2010-06-29  
JHP

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4132-xxx" USING YELLOW PAINT MARKER ON INSIDE SURFACE
- 7) WEIGHT: -041/-042 = 2.1 lbs
- 8) BOND D4132-3 GASKET TO INNER SURFACE OF WEARPLATE USING A THIN LAYER OF 3M 1300/1300L SCOTCH GRIP ADHESIVE

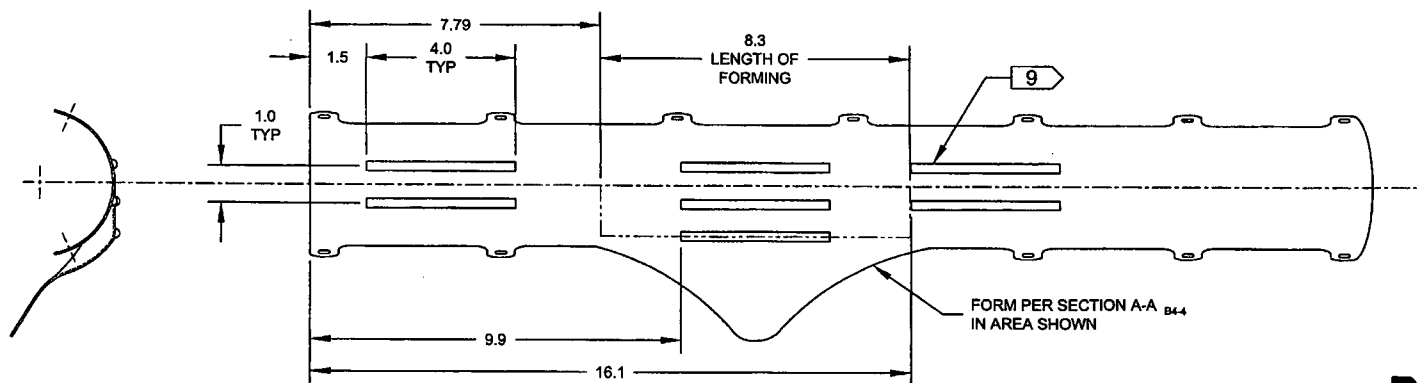
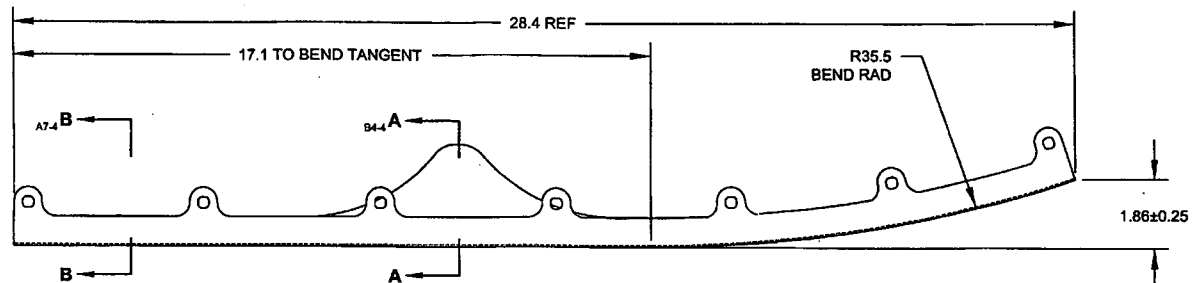
| REV.       | NEW ISSUE | DESCRIPTION | CP | 10.06.15 |
|------------|-----------|-------------|----|----------|
|            |           |             | BY | DATE     |
| DESIGN     |           |             |    |          |
| DRAWN      |           |             |    |          |
| CHECKED    |           |             |    |          |
| MFG. APPR. |           |             |    |          |
| APPROVED   |           |             |    |          |
| DE APPR.   |           |             |    |          |
| DATE       | 10.06.15  |             |    |          |

**DART AEROSPACE USA, INC**  
PORT HADLOCK, WA

DRAWING NO. REV. A  
D4132 SHEET 1 OF 6  
TITLE SCALE  
WEARPLATE, FWD NTS

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WORK ORDER  
NO. 62346



D4132-2 WEARPLATE, RH

**NOTES:**

- 1) MATERIAL: MAKE FROM D4132-1F
- 2) FINISH: POWDER COAT "GREY SANDEX" (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 1.8 lbs
- 8) WELD PER QSI 004
- 9) 2059B HARDCOAT WELDS, 0.063 TO 0.125 HIGH

**RELEASED**  
2010-06-28

|            |          |   |              |
|------------|----------|---|--------------|
| DESIGN     | 92       | <b>DART AEROSPACE USA, INC</b>  |              |
| DRAWN      | 91       | PORT HADLOCK, WA  |              |
| CHECKED    | 91       | DRAWING NO.   | REV. A       |
| MFG. APPR. | 91       | D4132   | SHEET 3 OF 6 |
| APPROVED   | 91       | TITLE   | SCALE        |
| DE APPR.   | 91       | WEARPLATE, FWD  | NTS          |
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